REMARKS

Claims 3, 4, 16-21, 25, 29, 31-33 and 45-50 are pending in the application and are rejected.

Priority

The Office Action indicates Applicants have not provided a certified copy of priority patent application UK 9814513.9.

Applicants believe copies of all of needed applications were provided by the International Bureau; nevertheless, a certified copy of the cited application is enclosed herewith.

Double Patenting

Claims 3, 4, 16-21, 25, 29, 31-33 and 45-50 are rejected under the judicial doctrine against obviousness-type double patenting as being unpatentable over claims 1-54 in U.S. patent 6,023,233 (referred to as "Craven") in view of U.S. patent 5,617,145 (referred to as "Huang").

The Office Action indicates "US Patent 6,023,233 issued to Craven teaches all the limitations of the instant application except for a minimum data rate. Craven however, suggest the use of predetermined data rate. Huang explicitly teaches a minimum data rate. ... it would have been obvious ... to modify the teachings in Craven use a minimum data rate taught by Huang in order to encode/decode data ... at different data rates."

Applicants respectfully traverse this double-patenting rejection for each of two reasons: (1) a proper showing has not been made to support the rejection, and (2) the actual differences between claims in the present application and in Craven are greater than what is alleged.

First, the Office Action does not provide an adequate showing to support the rejection. The Office Action indicates Craven teaches all limitations of the rejected claims except for a minimum data rate but suggests the use of a predetermined data rate. This is an improper basis. An obviousness-type double patenting rejection cannot be based on what is taught or suggested in Craven. "[T]he patent principally underlying the double patenting rejection is not considered prior art" (see MPEP 804 part II B.1).

In addition, the Office Action does not make clear the "differences between the inventions defined by the conflicting claims – a claim in the patent compared to a claim in the application" (MPEP 804 part II B.1). The Office Action refers only to groups of claims in the present application and in Craven and mentions only one difference. Even a casual glance to the claims will reveal this is not an accurate statement of how the claims differ. Furthermore, it does not set forth what claim in Craven is deemed to correspond to what claim in the present application. Applicants respectfully submit this is not a sufficient showing to support the rejection.

Second, as explained in our previous response, the differences between the claims in the present application and in Craven are greater than what is alleged in the Office Action. Stated differently, the claims in Craven fail to disclose or suggest all features of the claims even when considered in view of prior art such as Huang.

Independent claims 1 and 25 in the present application each have an element that determines a minimum data rate to which a packetized stream can be repacketized for successful decoding by a decoder having a given first-in-first-out (FIFO) buffer size. No claim in Craven has anything that corresponds to this feature and no known prior art suggests adding this feature to what is claimed.

Independent claim 45 is directed toward a device for decoding. The only claims in Craven that are directed toward a method or apparatus for decoding are claims 29-31. Claim 45 in the present application recites a feed buffer that is coupled ahead of a FIFO buffer. Nothing in claims 29-31 of Craven have anything that suggests this feed buffer and no known prior art suggests adding this feature to what is claimed.

If should be decided to maintain this obviousness-type double patent rejection, Applicants respectfully request that the next communication clearly show claim-by-claim the alleged differences and why these differences are deemed to be obvious variations.

Claim Rejections Under 35 U.S.C. § 103

Independent Claims 3 and 25 and Dependent Claims

Claims 3, 4, 16-18, 21, 25, 29, 31, 32 and 50 are rejected under 35 U.S.C. § 103 as being unpatentable over U.S. patent 5,619,337 (referred to as "Naimpally") in view of Huang and further in view of U.S. patent 5,377,051 (referred to as "Lane").

Applicants respectfully traverse the rejection of all claims. The arguments set forth in the Office Action suggest a linguistic approach may have been used to identify and combine prior art. These arguments suggest prior art has been selected because they contain certain words that are similar to words in the claims and then the selected art is combined in a manner that does not consider what is actually taught in these references.

With regard to independent claims 3 and 25, the Office Action indicates that:

- Naimpally teaches an encoder for producing an encoded packetized stream that comprises means for determining data rate to which the packetized stream could be decoded having given first-in-first-out (FIFO) buffer size" (col. 5 lns. 42-62);
- Naimpally does not teach determining a minimum data rate and introducing control data into the encoded variable rate stream, the control data representing the minimum;

- Huang teaches determining a minimum data rate and introducing control data into the encoded variable rate stream, the control data representing the minimum (col. 6 ln. 59 to col. 7 ln. 45);
- it would have been obvious to incorporate the teachings of Huang into the teachings of Naimpally "to provide a process of encoding/decoding data at different data rates";
- the combination of Naimpally and Huang does not teach repacketized data;
- Lane teaches repacketized data (col. 50 lns. 41-48); and
- it would have been obvious to modify the combined teachings of Naimpally and Huang with repacketized data as taught by Lane so a decoder could recognize a stream of data packets (Lane, col. 50 lns. 41-48).

Applicants respectfully traverse the rejection of claims 3 and 25 for each of the following reasons: (1) the alleged motivation to combine Naimpally and Huang did not exist, (2) the alleged motivation to combine Lane with Naimpally and Huang did not exist, and (3) even if combined, the references do not teach all that is claimed.

Motivation to Combine Naimpally and Huang

The alleged motivation to incorporate the teachings from Huang into the teachings in Naimpally did not exist. The Office Action argues that a person of ordinary skill in the relevant arts would have been motivated to modify teachings in Naimpally by teachings in Huang "in order to provide a process of encoding/decoding data at different data rates." This capability was already present in the prior art as explained in Naimpally. "According to the MPEG standard, data is produced at a highly variable rate" and "decoded at a variable rate" (see col. 1 lns. 50-53). The ability to vary the data rate to trade off MPEG-encoded picture quality against storage capacity or transmission bandwidth was well known. The need to encode and decode at different data rates would not have motivated a person of ordinary skill to look for some teaching in addition to what is disclosed in Naimpally because this was already well within the ability of a person having ordinary skill in the art.

The Office Action does not provide any other reason for making the combination; therefore, it fails to make out a *prima facie* case of obviousness and the rejection should be withdrawn.

Motivation to Combine Lane with Naimpally and Huang

The alleged motivation to incorporate the teachings from Lane into the combined teachings of Naimpally and Huang did not exist. The Office Action alleges that a person of ordinary skill in the arts would have been motivated to incorporate teachings from Lane "in order for a decoder to recognize a stream of data packets." This allegation appears to be based on a misunderstanding of what is taught in Lane.

Lane discloses a receiver for a digital video tape recorder (VTR) to improve the quality of images that are displayed when a digital VTR operates in a "trick play mode" such as fast forward or rewind (for example, see background discussion in col. 14 lns. 35-42 and col. 15 lns. 56-59). In one implementation illustrated in Fig. 10A and discussed in cols. 49-50, a trick play processing circuit 342 selects and processes data from a video/audio transport data packet stream for recording in fast scan track segments (see col. 49 lns. 16-24). Referring to the text in col. 49 ln. 62 to col. 50 ln. 8, Lane explains the following:

> The trick play processing circuit 318 [sic, 342] comprises a data filter 308 .... The data filter 308 examines the headers contained in each transport data packet. Using the information in the headers, the data filter 308 identifies the priority level ... and any other information needed to sort the data packers based on their utility for use in generating images during trick play operation.

Additional processing is performed to prioritize packets if the packets in the transport stream were not previously prioritized for trick play operation. For this case, the data packets are decoded "to the extent necessary for prioritization, a prioritizer such as prioritizer 104 is used to prioritize the packets, and the data filter 308 sorts the packets based on this prioritization. The sorted data is then re-encoded and re-packetized into a form recognized by a video decoder" (see col. 50 lns. 26-48).

The need in Lane to re-packetize data was the result of a need to depacketize data so that it could be decoded for prioritization. Prioritization was needed only for proper selection of packets for use during a trick play mode of operation for a VTR. The need for prioritization did not exist in Naimpally or Huang; therefore, the need for depacketization and re-packetization also did not exist.

The Office Action does not provide any other reason for making the combination; therefore, it fails to make out a *prima facie* case of obviousness and the rejection should be withdrawn.

Combination Fails to Teach All Features of Claims 3, 25

Even if there would have been a motivation to combine Naimpally, Huang and Lane, the combination fails to disclose or suggest determining a minimum data rate to which a packetized stream could be repacketized for successful decoding by a decoder having a given first-in-first-out (FIFO) buffer size as set forth in claims 3 and 25.

The Office Action acknowledges Naimpally does not disclose or suggest this feature but does allege it is taught by a combination of (1) Huang teaching a determination of a minimum rate (col. 6 ln. 59 to col. 7 ln. 45) and (2) Lane teaching repacketized data (col. 50 ln. 41-48).

Applicants respectfully disagree for each of the following reasons.

First, contrary to what is asserted in the Office Action, the cited text in Huang does not teach determining a minimum bit rate. Instead, the text describes specific calculations that may be used to determine the bit allocation for a particular picture so that a FIFO buffer does not overflow or underflow and also describes how this bit allocation may be used to select the encoding mode for the picture. The only rate that is mentioned is a "maximal audio bit rate," which is neither a minimum rate nor is there any teaching of how to determine a minimum rate. The cited text does mention the minimum bits needed to encode I and P picture frames, but this is not a minimum rate nor is there any teaching of how to determine it.

Second, although Lane does mention re-packetizing data, merely repacketizing data is not what is claimed. Instead, the claim recites determining a minimum rate at which a packetized data stream could be repacketized for successful decoding by a decoder having a given FIFO buffer size. The cited text in Lane is silent with regard to data rates and does not teach anything about how to determine any data rate much less the particular rate that is claimed.

Third, even if these references did teach what is alleged, this would not be sufficient to teach what is claimed. Disclosures of some arbitrary minimum rate and re-packetizing data does not teach or suggest what is claimed, nor would it enable a person of ordinary skill to determine the minimum rate to which a packetized stream could be repacketized for successful decoding by a decoder having a given FIFO buffer size.

Claims 4, 16-18, 21, 29, 31, 32 and 50 are dependent on one of the independent claims discussed above and add limitations that are not disclosed or suggested by the cited references.

Independent Claim 45 and Dependent Claims

Claims 45-49 are rejected under 35 U.S.C. § 103 as being unpatentable over Naimpally in view of Huang and further in view of U.S. patent 5,675,383 (referred to as "Yagasaki").

With regard to independent claim 45, the Office Action indicates that

- Naimpally teaches a device for decoding variable rate data organized as a stream of packets, each packet including a corresponding decoder time stamp (Abstract), and a FIFO buffer having an output (Abstract, col. 1 lns 21-34);
- Naimpally does not teach a feed buffer that receives the stream of packets to mitigate any interruption to the stream of packets;
- Huang teaches a buffer that receives the stream of packets to mitigate any interruption in the stream of packets (Abstract, Figs. 1-9);
- it would have been obvious to incorporate the teachings of Huang into the teachings of Naimpally "to provide a process of encoding/decoding data at different data rates";
- Yagasaki teaches a feed buffer (Fig. 1 element 2); and

- it would have been obvious to incorporate the feed buffer in Yagasaki into the combined teachings of Naimpally and Huang "in order to provide a system capable of implementing a FIFO memory."

Applicants respectfully traverse the rejection of claim 45 for each of the following reasons: (1) neither Naimpally nor Huang is pertinent, (2) the alleged motivation to combine Naimpally and Huang did not exist, (3) the alleged motivation to combine Yagasaki with Naimpally and Huang did not exist, and (4) even if combined, the references do not teach all that is claimed.

Pertinence of Naimpally and Huang

Claim 45 is directed toward a device that decodes a stream of packets. Naimpally discusses the need for encoders to control the rate of encoding so that a FIFO buffer in a decoder does not underflow or overflow (for example, see col. 1 ln. 56 to col. 2 ln. 14) and Huang discloses a similar concept (col. 1 lns. 61-65) but neither reference discloses any details about decoders or decoding. For this reason, the person of ordinary skill would not have been motivated to use the teachings in either reference to arrive at what is set forth in claim 45.

Motivation to Combine Naimpally and Huang

The Office Action seems to set forth two different motivations to combine the teachings in Naimpally and Huang: (1) provide a process of encoding/decoding data at different data rates, and (2) mitigate any interruption in the stream of packets. Neither of these alleged motivations existed.

The first alleged motivation is discussed above. This motivation to combine did not exist because encoding/decoding data at different rates was already known in the prior art and already existed in the systems that are disclosed in these references.

With regard to the second alleged motivation, neither Naimpally nor Huang disclose anything about interruptions other than those caused by conventional decoder FIFO buffer overflow or underflow. Both Naimpally and Huang disclose how to control the encoding rate so that this problem does not occur. There are no other interruptions that are disclosed or suggested in either reference that would have motivated a person to look for additional teachings.

Furthermore, the second alleged motivation is inconsistent with what is admitted about the prior art. On one hand, the Office Action argues the motivation to combine is related to a feed buffer but on the other hand it admits neither Naimpally nor Huang disclose a feed buffer.

Motivation to Combine Yagasaki with Naimpally and Huang

The alleged motivation to incorporate the teachings from Yagasaki into the combined teachings of Naimpally and Huang did not exist. The Office Action alleges that a person of ordinary skill in the relevant arts would have been motivated to incorporate teachings from Yagasaki "in

order to provide a system capable of implementing a FIFO. Memory." The known prior art that is briefly mentioned in Naimpally and in Huang included FIFO buffers as explained above. The need to implement a FIFO buffer would not have motivated a person of ordinary skill to look for some teaching in addition to that disclosed in Naimpally or in Huang.

Combination Fails to Teach All Features of Claim 45

Even if there would have been a motivation to combine Naimpally, Huang and Yagasaki, the combination fails to disclose or suggest the feed buffer as set forth in claim 45.

The Office Action alleges that Yagasaki does disclose this feed buffer and refers to the buffer 2 shown in Fig. 1 as support for this allegation.

Applicants respectfully disagree. The buffer 2 mentioned in the Office Action is part of an encoder. As explained above, claim 45 is directed toward a decoder.

Applicants admit Yagasaki does disclose a buffer in a decoder (see Buffer 21 in Fig. 1) but this buffer corresponds to the FIFO buffer recited in the claim and mentioned briefly in Naimpally and Huang. Yagasaki explains that the buffer 21 must be implemented in such a way that the first data input is the first output according to a method that is referred to as FIFO (see col. 2 lns. 11-17). There is nothing in any of the three references that discloses or suggests adding a feed buffer ahead of a FIFO buffer as claimed.

Claims 46-49 are dependent on independent claim 45 discussed above and add limitations that are not disclosed or suggested by the cited references.

CONCLUSION

Applicants submit a certified copy of a priority application and request reconsideration in view of the discussion set forth above.
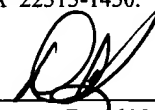
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